03-19 03-21-19

Student: _____ **Instructor:** Alfredo Alvarez **Assignment:**
Date: _____ **Course:** Math 0410 / 0320 Alvarez MATH3RDGRADEWARM145PMR

1. Determine the place value of the digit 7 in the whole number 5376.

5376
↑
Tens

Choose the correct answer below.

- ○ hundreds
- ○ thousands
- ○ ones
- ○ tens

Answer: tens

2. Write the whole number in expanded form.

9240 = 9(1000) + 2(100) + 4(10) =

9240

9240 = _____ (Type your answer using plus signs.)

Answer: 9000 + 200 + 40

3. The table shows the number of calories burned during 30 minutes of exercise and how the number of calories burned varies according to the weight of the person doing the exercise. For a person weighing 140 pounds, how many calories will be burned during 30 minutes of aerobic dance?

Activity	120 lb	140 lb
Moderate jogging	342	399
Moderate walking	120	140
Moderate cycling	148	172
Aerobic dance	218	255
Racquetball	224	262
Tennis	167	195

255 Calories

_____ calories

Answer: 255

4.

The table shows the number of calories burned during 30 minutes of exercise and how the number of calories burned varies according to the weight of the person doing the exercise. For a person weighing 140 pounds, which activity burns the most calories?

Activity	100 lb	140 lb
Moderate jogging	294	412
Moderate walking	100	140
Moderate cycling	127	178
Aerobic dance	176	246
Racquetball	195	273
Tennis	138	193

Most Calories

Choose the correct answer below

- A. Racquetball
- B. Moderate cycling
- C. Moderate walking
- D. Tennis
- E. Moderate jogging
- F. Aerobic dance

Answer: E. Moderate jogging

5.

The table shows the five longest rivers in the world.

Use the table to determine which river is the longest in the world.

River	Miles
Chang jiang-Yangtze (China)	3964
Amazon (Brazil)	4000
Tenisei-Angara (Russia)	3442
Mississippi-Missouri (U.S.)	3740
Nile (Egypt)	4145

Longest river

Which river is the longest in the world?

- Nile
- Amazon
- Tenisei-Angara
- Mississippi-Missouri
- Chang jiang-Yangtze

Answer: Nile

6.

The table shows the top ten popular breeds of dogs. Use the table to answer the following question.

Which breed has a greater average weight, the Golden retriever or the Labrador retriever?

The (1) _____ has a greater average weight.

Top Ten Popular Breeds of Dogs

Breed	Average Dog Maximum Height (in inches)	Average Dog Maximum Weight (in pounds)
Labrador retriever	25	75
German shepherd	26	95
Golden retriever	24	80
Beagle	15	30
Bulldog	26	90
Yorkshire terrier	9	7
Boxer	25	70
Poodle	standard: 26	standard: 70
Rottweiler	26	none given
Dachshund	9	25

greater average weight

(1) ○ Labrador retriever
○ Golden retriever

Answer: (1) Golden retriever

7. Add.

$$\begin{array}{r} 16 \\ +\,973 \\ \hline \end{array}$$

$$\begin{array}{r} 16 \\ +\,973 \\ \hline \square \end{array}$$

16
+ 973
989

Answer: 989

8. Add.

$$\begin{array}{r} 14 \\ 13 \\ +\,41 \\ \hline \end{array}$$

The sum is ☐.

14
13
+ 41
68

Answer: 68

9. Subtract.

$$\begin{array}{r} 63 \\ -\ 47 \\ \hline \end{array}$$

The difference is ☐.

Answer: 16

5 13
63
-47
16

10. Subtract.

$$\begin{array}{r} 700 \\ -\ 584 \\ \hline \end{array}$$

The difference is ☐.

Answer: 116

6 9 10
700
-584
116

11. Subtract. Check by adding.

$$\begin{array}{r} 473 \\ -\ 69 \\ \hline \end{array}$$

The difference is ☐.

Answer: 404

6 13
473
-69
404

12. Subtract.

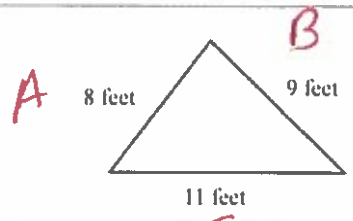
25 − 16

The answer is ☐.

Answer: 9

1 15
25
-16
9

13. Find the perimeter of the figure.

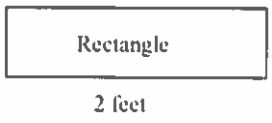


The perimeter is ☐ feet.

Answer: 28

P = A + B + C
P = 8 + 9 + 11
P = 17 + 11
P = 28

14. Find the perimeter of the figure.



W
L

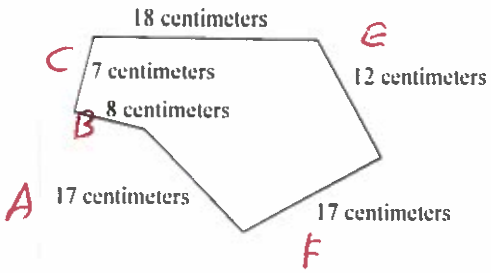
$P = 2L + 2W$
$P = 2(2) + 2(1)$
$P = 4 + 2$
$P = 6$

[ ] ft

Answer: 6

15. Find the perimeter of the figure.

$P = A + B + C + D + E + F$
$P = 17 + 8 + 7 + 18 + 12 + 17$
$P = 79$



[ ] cm

Answer: 79

16. Find the total of 89, 29, 3, 17, and 275.

$89 + 29 + 3 + 17 + 275 = 413$

The total is [ ].

Answer: 413

17. Find the difference of 92 and 77.

$92 - 77 = 15$

The difference is [ ].

Answer: 15

18. What is 365 increased by 80?

$365 + 80 = 445$

365 increased by 80 is [ ].

Answer: 445

19. A new notebook computer with DVD player costs $510. Derik Muller has $1107 in his checking account. How much will be left in his checking account after he buys the notebook computer?

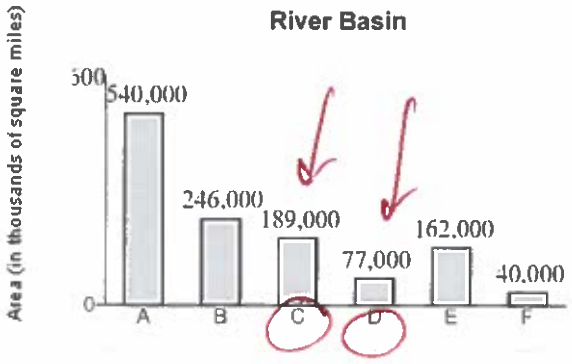
$1107 - 510 = 597$

Derik will have $[ ] remaining in his checking account after he buys the notebook computer.

Answer: 597

20. Find the total land area drained by the C and D sub-basins.

189 000
+ 77000
266,000

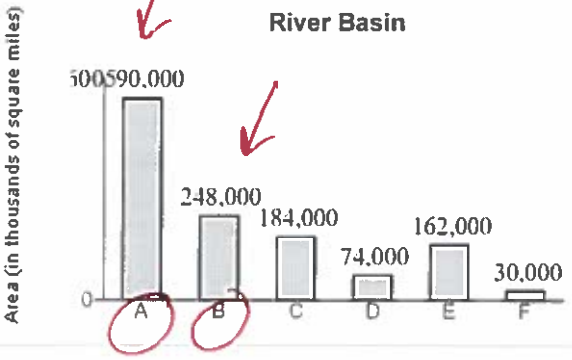


[ ] sq mi

Answer: 266,000

21. How many more square miles of land is drained by the A sub-basin than the B sub-basin?

590 000
− 248 000
342 000

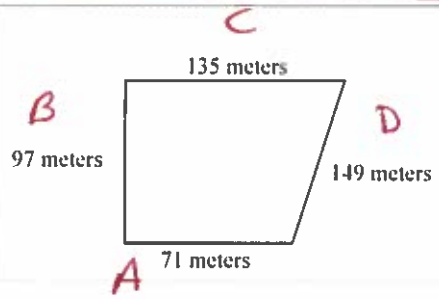


[ ] sq mi

Answer: 342,000

22. Alexander is installing a pen for his dog. The pen will have the shape and dimensions of the figure shown to the right. How many meters of fencing are needed to enclose the the area shown?

P = A+B+C+D
P = 71+97+135+149
P = 452



[ ] m

Answer: 452

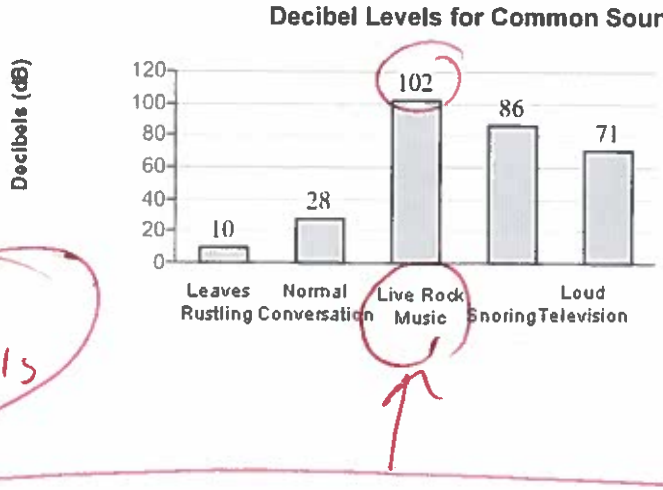
23. Evelyn Abrams is reading an 845-page book. If she has just finished reading page 693, how many more pages must she read to finish the book?

845
− 693
152

[ ] pages

Answer: 152

24. What is the dB rating for live rock music?

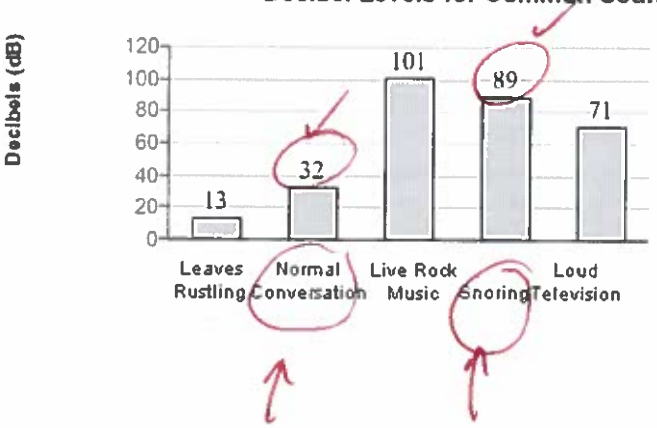


102 decibels

_____ dB

Answer: 102

25. How much louder is the sound of snoring than normal conversation?



89
−32
57

_____ dB

Answer: 57

26. A permanent game board is made of granite. It is in the shape of a square with side lengths of 34 ft. Find the perimeter of the square playing board.

$P = 4s$
$P = 4(34)$
$P = 136$

34
× 4
136

The perimeter is _____ feet.

Answer: 136

27. The table on the right shows the number of a particular store in ten states. What is the total number of stores located in the three states with the most stores?

State	Number of Stores
Arizona	27
California	63
Florida	82
Georgia	91
Illinois	144
New York	48
Michigan	193
Minnesota	29
Ohio	76
Texas	58

91
144
+193
428

A total of _____ stores are located in the three states with the most stores.

Answer: 428

28. A particular state has 2059 miles of urban highways and 3838 miles of rural highways. Find the total highway mileage in the state.

The total highway mileage in the state is ____ miles.

Answer: 5897

2059
+ 3838
5897

29. Round 9,768 to the nearest hundred.

The number 9,768 rounded to the nearest hundred is ____.

Answer: 9,800

9768
↑ since 6 ≥ 5 round up
9800

30. Round 55,227 to the nearest thousand.

55,227 rounded to the nearest thousand is ____.

Answer: 55,000

55227
↑ since 2 < 5 do not round up
55000

31. Estimate the perimeter of the rectangle by first rounding the length of each side to the nearest ten.

L
57 meters → 60
17 meters → 20 W

The estimated perimeter is ____ meters.

Answer: 160

P = 2L + 2W
P = 2(60) + 2(20)
P = 120 + 40
P = 160

32. Multiply.

$$\begin{array}{r} 76 \\ \times\ 9 \\ \hline \end{array}$$

Answer: 684

$$\begin{array}{r} 76 \\ \times\ 9 \\ \hline \end{array}$$

76
× 9
684

33. Multiply.

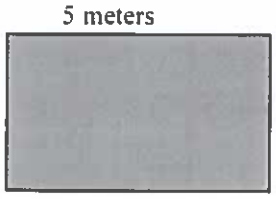
$$\begin{array}{r} 67 \\ \times\ 75 \\ \hline \end{array}$$

The product is ____.

Answer: 5025

67
× 75
335
469
5025

34. Find the area and the perimeter of the rectangle shown to the right.



The area of the rectangle is _____ (1) _____

The perimeter of the rectangle is _____ (2) _____

(1) ○ cubic meters. (2) ○ cubic meters.
○ meters. ○ meters.
○ square meters. ○ square meters.

Answers 15

(1) square meters.

16

(2) meters.

35. One triple fudge brownie contains 171 calories. How many calories are in 10 triple fudge brownies?

_____ calories

Answer: 1710

36. The textbook for a course in biology costs $97. There are 36 students in the class. Find the total cost of the biology books for the class.

The total cost is $_____.

Answer: 3,492

37. A plot of land measures 90 feet by 130 feet. Find its area.

The area of the rectangle is _____ (1) _____

(1) ○ cubic feet.
○ square feet.
○ feet.

Answers 11,700

(1) square feet.

38. One ounce of nuts contains 215 calories. How many calories are in 9 ounces of nuts?

[ ] calories

$\frac{1}{215} = \frac{9}{N}$

$1(N) = 215(9)$

$N = 1935$

Antwort: 1935

215 × 9 = 1935

39. A plant for a tea company has bagging machines capable of bagging 3000 bags of tea per minute. If the plant runs 19 hours a day, how many tea bags are produced in one day?

The company produces [ ] tea bags in one day of operation.

$A = (3000)(19hr)$

$A = (3000)(19)(60))$

$A = 3,420,000$

Answer: 3,420,000

40. Divide the following and then check by multiplying.

$5\overline{)320}$

64

$5\overline{)320}$

$-(30)$

20

$-(20)$

0 rem

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. The quotient does not have a remainder. The quotient is [ ].
- B. The quotient has a remainder not equal to 0. The quotient is [ ] R [ ].
- C. The quotient is undefined.

Answer: A. The quotient does not have a remainder. The quotient is 64.

41. Divide the following and then check by multiplying.

$3\overline{)269}$

89 2/3

$3\overline{)269}$

$-(24)$

29

$-(27)$

2 rem

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. The quotient does not have a remainder. The quotient is [ ].
- B. The quotient has a remainder not equal to 0. The quotient is [ ] R [ ].
- C. The quotient is undefined.

Answer: B. The quotient has a remainder not equal to 0. The quotient is 89 R 2.

42. For their wedding, Ben and Jen paid $11 for each guest's dinner. The total bill was $1606. How many guests did they have at their wedding?

[ ] guests

$\frac{1606}{11} =$

$146 =$

146

$11\overline{)1606}$

$-(11)$

50

$-(44)$

66

$-(66)$

0 rem

Answer: 146

43. A truck hauls wheat to a storage granary. It carries a total of 6,370 bushels of wheat in 14 trips. How much does the truck haul each trip if each trip it hauls the same amount?

The truck hauls [ ] bushels each trip.

Answer: 455

44. Suppose the elevation of a peak on a certain planet is 21,120 feet. A mile is 5280 feet. How many miles tall is the peak?

The peak is [ ] miles tall.

Answer: 4

45. Find the average value of the following list of numbers.

10, 24, 27, 25, 11, 17

The average value is [ ].

Answer: 19

46. Evaluate.

3^3

3^3 = [ ]

Answer: 27

47. Simplify.

$27 + 9 \cdot 7$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. $27 + 9 \cdot 7 =$ ____
- B. The expression is undefined.

Answer: A. $27 + 9 \cdot 7 =$ 90

48. Simplify.

$42 \div 7 - 6$

PEMDAS

$42 \div 7 - 6 =$

$6 - 6 =$

$0 =$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. $42 \div 7 - 6 =$ _____
- B. The expression is undefined.

Answer: A. $42 \div 7 - 6 =$ **0**

49. Simplify.

$50 + \frac{15}{3}$

PEMDAS

$50 + \frac{15}{3} =$

$50 + 5 =$

$55 =$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. $50 + \frac{15}{3} =$ _____
- B. The expression is undefined.

Answer: A. $50 + \frac{15}{3} =$ **55**

50. Simplify.

$8 \cdot 8 + 6 \cdot 7$

PEMDAS

$8 \cdot 8 + 6 \cdot 7 =$

$64 + 6 \cdot 7 =$

$64 + 42 =$

$106 =$

$64 + 42 = 106$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. $8 \cdot 8 + 6 \cdot 7 =$ _____
- B. The expression is undefined.

Answer: A. $8 \cdot 8 + 6 \cdot 7 =$ **106**

51. Simplify.

$(2 + 5) \cdot (10 - 4)$

PEMDAS

$(2+5)(10-4)$

$(7) \cdot (6) =$

$7 \cdot 6 =$

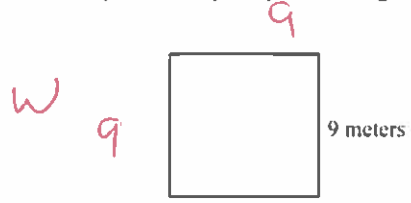
$42 =$

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. $(2 + 5) \cdot (10 - 4) =$ _____
- B. The expression is undefined.

Answer: A. $(2 + 5) \cdot (10 - 4) =$ **42**

52. Find the area and perimeter of the square shown to the right.



W 9 9 L

The area of the square is ____ (1) ____

The perimeter of the square is ____ (2) ____

(1) ○ square meters. ○ meters. (2) ○ meters. ○ square meters.

$A = LW$
$A = (9)(9)$
$A = 81$

$P = 2L + 2W$
$P = 2(9) + 2(9)$
$P = 18 + 18$
$P = 36$

Answers 81

(1) square meters.

36

(2) meters.

53. Evaluate the expression for x = 2 and z = 3.

$3xz - 4x$

$3xz - 4x =$ ____

$3 \times 2 - 4x =$
$3(2)(3) - 4(2) =$
$3(6) - 4(2) =$
$18 - 8 =$
$10 =$

PEMDAS

Answer: 10

54. Evaluate the expression for x = 3 and y = 4.

$\frac{3y - 6}{x}$

$\frac{3y - 6}{x} =$ ____

$\frac{3y - 6}{x} =$
$\frac{3(4) - 6}{(3)} =$
$\frac{12 - 6}{3} =$
$\frac{6}{3} =$
$2 =$

PEMDAS

Answer: 2

55. Evaluate the expression for x = 11, y = 3, and z = 4.

$\frac{x + 3y}{z}$

$\frac{x + 3y}{z} =$ ____

$\frac{x+3y}{z} =$
$\frac{(11) + 3(3)}{(4)} =$
$\frac{11 + 9}{4} =$
$\frac{20}{4} =$
$5 =$

PEMDAS

Answer: 5

56. Evaluate the algebraic expression for the given value.

$x^2 - 3x + 5$, for $x = 4$

When $x = 4$, $x^2 - 3x + 5 =$ [ ].
(Simplify your answer.)

Answer: 9

$x^2 - 3x + 5 =$
$(4)^2 - 3(4) + 5 =$
$(4)(4) - 3(4) + 5 =$
$16 - 12 + 5 =$
$4 + 5 =$
$9 =$

PEMDAS

57. Evaluate the following expression for $x = 1$ and $y = 2$.

$$\frac{6x + 2y}{2x}$$

The answer is [ ].

Answer: 5

$\frac{6x+2y}{2x} =$
$\frac{6(1)+2(2)}{2(1)} =$
$\frac{6+4}{2} =$
$\frac{10}{2} =$
$5 =$

PEMDAS

58. Determine which numbers in the set are solutions of the equation.

$n - 5 = 12$; {15, 17, 19}

Select the correct choice below and, if necessary, fill in the answer box to complete your choice.

- A. [ ] in the set {15, 17, 19} is a solution of the equation $n - 5 = 12$.
- B. None of the numbers in the set are solutions of the equation

Answer: A. 17 in the set {15, 17, 19} is a solution of the equation $n - 5 = 12$.

$n - 5 = 12$
$5 - 5 = 12$
$0 \neq 12$ NO

$n - 5 = 12$	$n - 5 = 12$
$17 - 5 = 12$	$19 - 5 = 12$
$12 = 12$	$14 \neq 12$
YES	NO

59. Simplify.

$6 + 9 \cdot 3 - 11$

$6 + 9 \cdot 3 - 11 =$ [ ]

Answer: 22

$6 + 9 \cdot 3 - 11 =$
$6 + 27 - 11 =$
$33 - 11 =$
$22 =$

60. Solve. Check your solution.

$x + 6 = 23$

The solution is $x =$ [ ].

Answer: 17

$x + 6 = 23$
$x + 6 - 6 = 23 - 6$
$x = 17$

Check
$x + 6 = 23$
$17 + 6 = 23$
$23 = 23$
Good

61. Solve.

$2x = 4$

The solution is x = [ ].

Answer: 2

$2x = 4$

$\frac{2x}{2} = \frac{4}{2}$

$x = 2$

Check

$2x = 4$

$2(2) = 4$

$4 = 4$ Good

62. Solve the following equation.

$2x - 2 = 0$

x = [ ]

Answer: 1

$2x - 2 = 0$

$2x - 2 + 2 = 0 + 2$

$2x = 2$

$\frac{2x}{2} = \frac{2}{2}$

$x = 1$

Check

$2x - 2 = 0$

$2(1) - 2 = 0$

$2 - 2 = 0$

$0 = 0$ Good

63. Solve the equation.

$5n + 50 = 55$

n = [ ]

Answer: 1

$5n + 50 = 55$

$5n + 50 - 50 = 55 - 50$

$5n = 5$

$\frac{5n}{5} = \frac{5}{5}$

$n = 1$

Check

$5n + 50 = 55$

$5(1) + 50 = 55$

$5 + 50 = 55$

$55 = 55$ Good

64. Write a fraction to represent the shaded region of the figure.

A fraction which represents the figure is [ ].

Answer: $\frac{2}{7}$

$\frac{2}{7}$

65. Represent the shaded part of the group of circles with
A. an improper fraction and
B. a mixed number.

A. The improper fraction which represents the shaded area of the figure group is _____.

B. The mixed number which represents the shaded area of the figure group is _____.

Answers $\frac{7}{4}$

$1\frac{3}{4}$

66. Represent the shaded part of the group of triangles with
A. an improper fraction and
B. a mixed number.

A. The improper fraction that represents the shaded area of the figure group is _____.

B. The mixed number that represents the shaded area of the figure group is _____.

Answers $\frac{5}{4}$

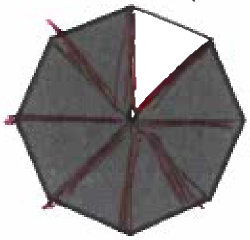
$1\frac{1}{4}$

67. Write a fraction to represent the shaded region of the figure.

The fraction which represents the shaded region is _____.

Answer: $\frac{5}{12}$

68. Write a fraction to represent the shaded part of the figure.



The fraction representing the shaded part is ________.

Answer: $\frac{7}{8}$

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69. Write a fraction to represent the shaded region of the figure.

The fraction that represents the shaded region of this figure is ________.

Answer: $\frac{5}{9}$

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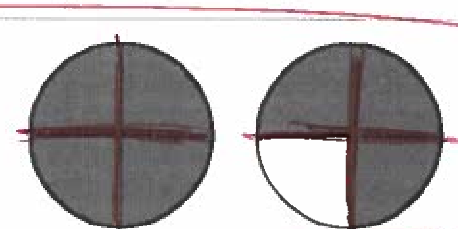
70. Represent the shaded part of the group of figures with (a) an improper fraction and (b) a mixed number.



(a) Write the shaded area as an improper fraction.

____

(b) Write the shaded area as a mixed number.

____

Answers $\frac{7}{4}$

$1\frac{3}{4}$

71. Represent the shaded part of the group of figures with **(a)** an improper fraction and **(b)** a mixed number.

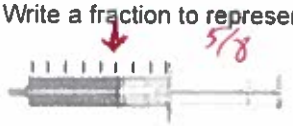
a. Write the shaded area as an improper fraction.

b. Write the shaded area as a mixed number.

Answers $\frac{7}{2}$

$3\frac{1}{2}$

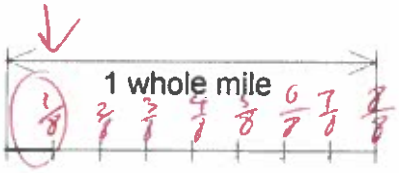
72. Write a fraction to represent the shaded part of the syringe.



The fraction represented by the shaded parts is .

Answer: $\frac{5}{8}$

73. Write a fraction to represent the shaded part of the distance.



The fraction that represents the shaded part is .

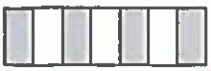
Answer: $\frac{1}{8}$

74.

Each of the objects shown to the right is divided into equal sections and part of each object is shaded. The shaded part is a fraction of the whole object.

Which object represents the fraction $\frac{3}{7}$?

Choose the correct answer below.

A. 

B. 

C. 

D. 

E. None of the above.

Answer:

B. 

75.

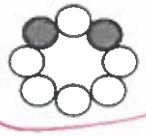
Each of the objects shown to the right is divided into equal sections and part of each object is shaded. The shaded part is a fraction of the whole object.

Which object represents the fraction $\frac{2}{8}$?

Choose the correct answer below.

A. 

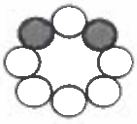
B. 

C. 

D. 

E. None of the above.

Answer:

C. 

76. Each of the figures shown to the right is divided into equal sections, and part of each figure is shaded. The shaded part is a fraction of the whole figure.

Which figure represents the fraction $\frac{8}{8}$?

Choose the correct answer below.

A. 

B. 

C. 

D. 

E. None of the above.

Answer: A. 

77. In an American Sign Language (A.S.L) class of 16 students, 15 are hearing impaired. What fraction of the students are hearing impaired?

The fraction of the students that are hearing impaired is ____.

Answer: $\frac{15}{16}$

78. Graph the fraction on a number line.

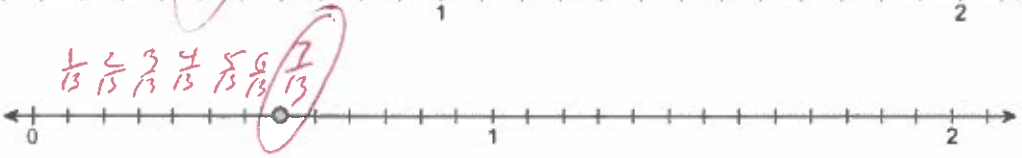
$\frac{3}{10}$

Answer:

79. Graph the fraction on a number line.

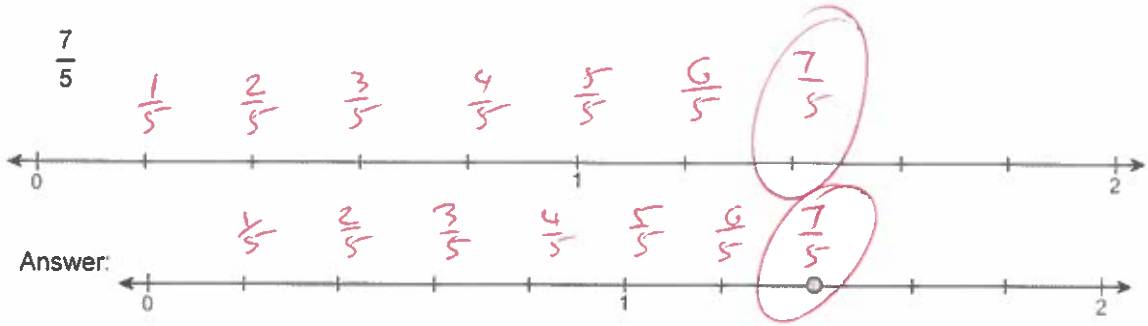
$\frac{7}{13}$

Answer:



80. Graph the fraction on a number line.

$\frac{7}{5}$



Answer:

81. Find the prime factorization of the following number.

56

The prime factorization of 56 is _____.

Answer: $2^3 \cdot 7$

Primes 2, 3, 5, 7, 11, 13, ...

2 | 56
2 | 28
2 | 14
7 | 7
1

$56 = 2 \cdot 2 \cdot 2 \cdot 7$

OR

$= 2^3 \cdot 7$

82. Find the prime factorization of the following number.

195

The prime factorization of 195 is _____.

Answer: $3 \cdot 5 \cdot 13$

Primes 2, 3, 5, 7, 11, 13, ...

3 | 195
5 | 65
13 | 13
1

$195 = 3 \cdot 5 \cdot 13$

83. Write the fraction in lowest terms.

$\frac{42}{54}$

Answer: $\frac{7}{9}$

$\frac{42}{54} =$ _____

$\frac{42}{54} = \frac{2 \cdot 3 \cdot 7}{2 \cdot 3 \cdot 3 \cdot 3} = \frac{7}{3 \cdot 3} = \frac{7}{9}$

Primes 2, 3, 5, 7, 11, 13, ...

2 | 42
3 | 21
7 | 7
1

2 | 54
3 | 27
3 | 9
3 | 3
1

84. Perform the indicated operation.

$4 \div \frac{7}{13}$

$4 \div \frac{7}{13} =$ _____ (Simplify your answer.)

Answer: $\frac{52}{7}$

$4 \div \frac{7}{13} =$

$\frac{4}{1} \div \frac{7}{13} =$

$\frac{4}{1} \cdot \frac{13}{7} =$

$\frac{52}{7}$

85. Perform the indicated operation.

$\frac{3}{11} + \frac{13}{33}$

$\frac{3}{11} + \frac{13}{33} =$ ☐ (Type an integer or a simplified fraction.)

Answer: $\frac{9}{13}$

$\frac{3}{11} \div \frac{13}{33} =$

$\frac{3}{11} \cdot \frac{33}{13} =$

Primes 2, 3, 5, 7, 11, 13...

3 | 33
11 | 11
1

$\frac{3}{11} \cdot \frac{3 \cdot 11}{13} =$

$\frac{3 \cdot 3}{13} =$

$\frac{9}{13}$

86. Find $\frac{1}{5}$ of 120.

$\frac{1}{5}$ of 120 is ☐. (Simplify your answer. Type a whole number, fraction, or mixed number.)

Answer: 24

$\frac{1}{5}(120) =$

$\frac{1}{5} \cdot \frac{120}{5} =$

$\frac{120}{5} =$

$24 =$

24
5 | 120
100
20
-20
0

87. Find $\frac{3}{8}$ of 48. Write the answer in simplest form.

$\frac{3}{8}$ of 48 is ☐. (Simplify your answer.)

Answer: 18

$\frac{3}{8}(48) =$

$\frac{3}{8} \cdot \frac{48}{1} =$

$\frac{3}{2 \cdot 2 \cdot 2} \cdot \frac{2 \cdot 2 \cdot 2 \cdot 3}{1} =$

$3 \cdot 2 \cdot 3 =$

18

Primes 2, 3, 5, 7, 11, 13...

48 | 2
24 | 2
12 | 2
6 | 2
3 | 3
1

88. Insert <, >, or = between the pair of numbers to form a true statement.

5.398 5.4

5.398 ☐ 5.4

Answer: <

$5.398 < 5.400$ rewrite

89. Write <, >, or = between the pair of numbers to form a true statement.

0.338 0.33800

0.338 ☐ 0.33800

Answer: =

$0.33800 = 0.33800$ rewrite

90. Round the decimal to the nearest tenth.

0.68

0.68 rounded to the nearest tenth is _____.

Answer: 0.7

0.68 ↑ since 8 ≥ 5 round up → 0.7

91. Round 0.6076 to the nearest thousandth.

0.6076 ≈ _____

Answer: 0.608

0.6076 ↑ since 6 ≥ 5 round up → 0.608

92. Round the monetary amount to the nearest dollar.

$28.36

$28.36 rounded to the nearest dollar is $_____.

Answer: 28

$28.36 ↑ since 3 < 5 do not round up → $28

93. Write as a decimal.

$9\frac{3}{100}$

$9\frac{3}{100}$ = _____

Answer: 9.03

$9\frac{3}{100} = 9 + \frac{3}{100} = 9 + .03 = 9.03$

$100\overline{)3.00}$ → $-(3\,00)$ → 0, so $\frac{3}{100} = .03$

94. Add the following.

2.4 + 6.15

2.4 + 6.15 = _____ (Type an integer or a decimal.)

Answer: 8.55

$2.40 + 6.15 = 8.55$

95. Subtract and check the following.

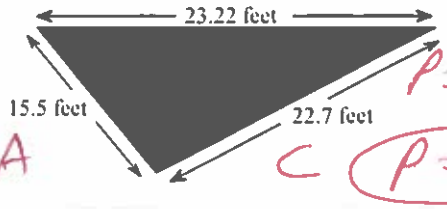
15 − 1.3

15 − 1.3 = _____ (Type an integer or a decimal.)

Answer: 13.7

$15.0 - 1.3 = 13.7$

96. A landscape architect is planning a border for a flower garden shaped like a triangle. The sides of the garden measure 15.5 feet, 23.22 feet, and 22.7 feet. Find the amount of border material needed.



The amount of border material needed is ____ feet.
(Type an integer or a decimal.)

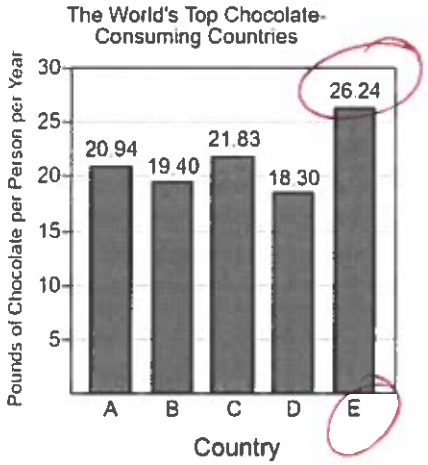
Answer: 61.42

97. The bar graph shows the top five chocolate-consuming nations in the world. Use this graph to answer the following.

Which country has the greatest chocolate consumption per person?

Choose the correct answer below.

- [x] Country E
- [ ] Country A
- [ ] Country C
- [ ] Country D
- [ ] Country B



Answer: Country E

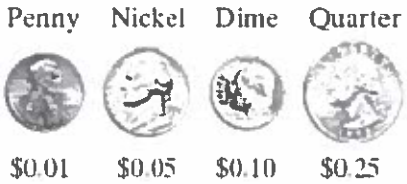
98. Use the values of the coins given below. Write the value of the group of coins shown to the right. To do so, it is usually easiest to start with the coin(s) of greatest value and end with the coin(s) of least value.

Penny	Nickel	Dime	Quarter
			
$0.01	$0.05	$0.10	$0.25

The total value of the group is $ ____.

Answer: 1.45

99. Use the values of the coins given to the right. Name the different ways that coins can have a value of $0.18 given that you may use no more than 10 coins.

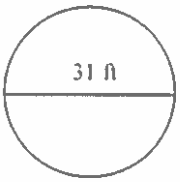


Choose the correct answer below. Select all that apply.

- [x] A. 3 nickels and 3 pennies
- [x] B. 2 nickels and 8 pennies
- [x] C. 1 dime, 1 nickel and 3 pennies
- [ ] D. 3 nickels and 5 pennies
- [ ] E. 1 dime, 2 nickels and 4 pennies
- [x] F. 1 dime and 8 pennies

Answer: A. 3 nickels and 3 pennies, B. 2 nickels and 8 pennies, C. 1 dime, 1 nickel and 3 pennies, F. 1 dime and 8 pennies

100. Find the circumference of the circle in terms of π. Then use the approximation 3.14 for π and approximate the circumference.



$C = \pi D$
$C = \pi(31)$
$C = 31\pi$

$C = 3.14D$
$C = 3.14(31)$
$C = 97.34$

a. Find the circumference of the circle in terms of π.

The exact circumference is _____ ft.

b. Find the circumference of the circle using 3.14 as an approximation for π.

The approximate circumference is _____ ft. (Round to the nearest hundredth as needed.)

$$\begin{array}{r} 3.14 \\ \times\ 31 \\ \hline 314 \\ 942 \\ \hline 97.34 \end{array}$$

Answers 31π

97.34

101. A 1-ounce serving of cream cheese contains 7.9 grams of saturated fat. How much saturated fat is in 15 ounces of cream cheese?

_____ g

$\frac{1}{7.9} = \frac{15}{N}$

$1(N) = 7.9(15)$

$N = 118.5$

$$\begin{array}{r} 7.9 \\ \times\ 15 \\ \hline 395 \\ 79 \\ \hline 118.5 \end{array}$$

Answer: 118.5

102. The screen of a portable digital device is a rectangle that measures 3.5 inches by 2.6 inches. Find the area of the screen.

The area is _____ square inches. (Type an integer or a decimal.)

$A = LW$
$A = (3.5)(2.6)$
$A = 9.1$

$$\begin{array}{r} {\scriptstyle 1\ 1} \\ 3.5 \\ \times\ 2.6 \\ \hline 210 \\ 70 \\ \hline 9.10 \end{array}$$

Answer: 9.1

103. A meter is a unit of length approximately equal to 39.37 inches. If someone is 1.61 meters tall, what is his or her approximate height in inches?

Using the given conversion, someone who is 1.61 meters tall has a height of ____ inches.
(Type an integer or a decimal.)

Answer: 63.3857

$\frac{1}{39.37} = \frac{1.61}{N}$ $N = 63.3857$

$1(N) = 39.37(1.61)$ cross mult

104. One year, farmers received an average of $13.165 per bushel of wheat. How much did a farmer receive for selling 100 bushels of wheat?

The farmer received $____. (Round to the nearest cent as needed.)

Answer: 1316.50

13.165 × 100 = 1316.500

105. Perform the indicated operation.

5.8 + 0.01

5.8 + 0.01 = ____ (Type an integer or a decimal.)

Answer: 5.81

5.80 + 0.01 = 5.81

106. Find the decimal equivalent of the following fraction.

$\frac{11}{20}$

$\frac{11}{20}$ = ____

Answer: 0.55

20 | 11.00 = .55, −(100), 100, −(100), 0

107. Write $2\frac{3}{20}$ as a decimal.

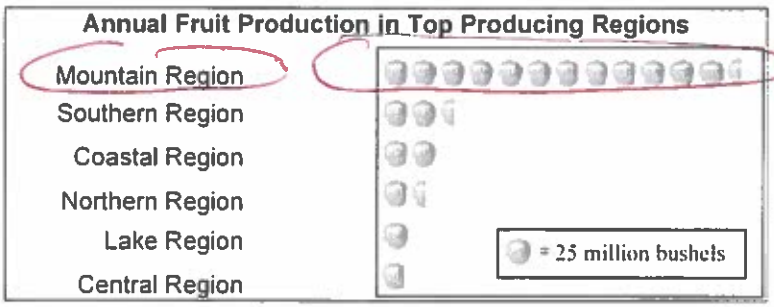
$2\frac{3}{20}$ = ____

Answer: 2.15

$2\frac{3}{20} = 2 + \frac{3}{20} = 2 + .15 = 2.15$

20 | 3.00 = .15, −(20), 100

108. The pictograph shows last year's fruit production by the top fruit-producing regions. Which region produced the greatest quantity of fruit?



Which region produced the greatest quantity of fruit?

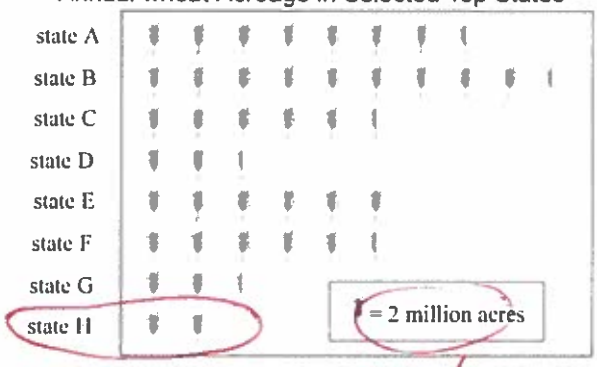
- A. The coastal region
- B. The mountain region
- C. The southern region
- D. The central region
- E. The lake region
- F. The northern region

mountain region

Answer: B. The mountain region

109. The pictograph on the right shows the number of acres devoted to wheat production in the selected states.

Approximate the number of acres of wheat planted in state H.



The number of acres of wheat planted in state H is approximately ____ million acres.
(Type an integer or a decimal.)

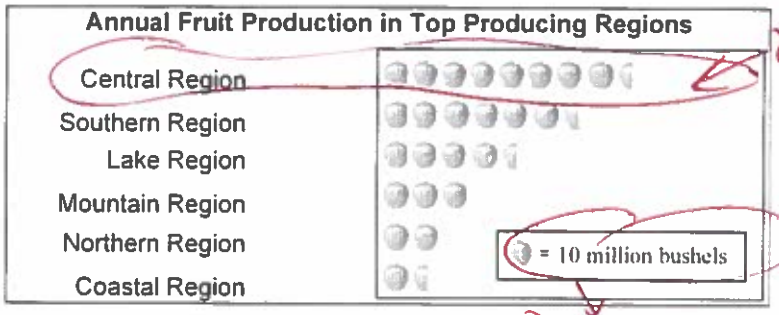
(2) + (2) =

2 + 2 =

4 =

Answer: 4

110. The pictograph shows last year's fruit production by the top fruit-producing regions. Which region produces about 85 million bushels of fruit?



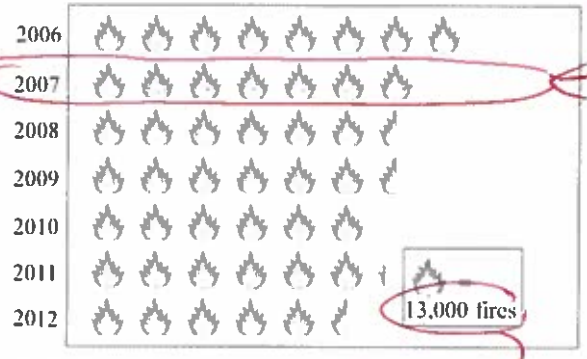
Choose the correct answer below.

- A. The coastal region
- B. The southern region
- C. The mountain region
- D. The central region
- E. The northern region
- F. The lake region

Answer: D. The central region

111. The pictograph on the right shows the average number of wildfires in a country between 2006 and 2012.

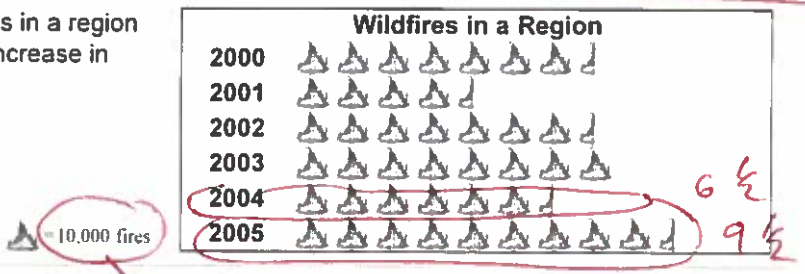
Approximate the number of wildfires in 2007.



The number of wildfires in the year 2007 is approximately [ ].
(Type an integer or a decimal.)

Answer: 91,000

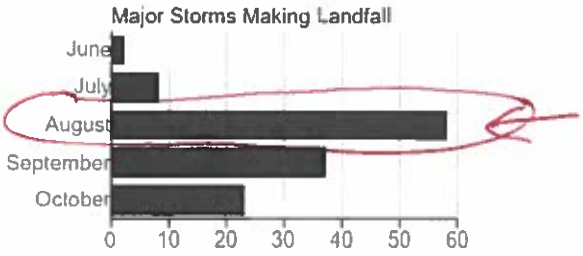
112. The pictograph shows the annual number of wildfires in a region between 2000 and 2005. What was the amount of increase in wildfires from 2004 to 2005?



The number of wildfires in the region increased by about [ ] from 2004 to 2005.

Answer: 30,000

113. The bar graph shows the number of major storms, by month, that have made landfall in a region between 1851 and 2005. In which month did the most major storms make landfall in the region?

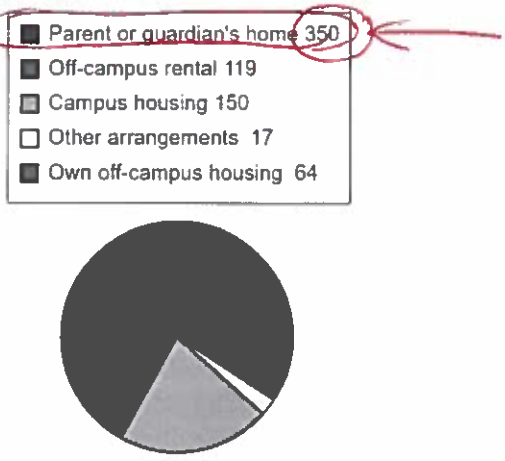


In which month did the most major storms make landfall in the region?

- ○ September
- ○ June
- ○ October
- ○ July
- ○ August
- ○ Cannot be determined

Answer: August

114. The circle graph is a result of surveying 700 college students. They were asked where they live while attending college. Use this graph to find where most of these college students live.



Choose the correct answer below.

- ○ A. Parent or guardian's home
- ○ B. Other arrangements
- ○ C. Own off-campus housing
- ○ D. Off-campus rental
- ○ E. Campus housing

Answer: A. Parent or guardian's home

115. Find the square root.

$\sqrt{64}$

$\sqrt{64}$ = ☐

Answer: 8

$\sqrt{64} =$

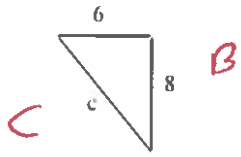
$8 =$

$(8)^2 =$

$(8)(8) =$

64

116. Find the length of the third side of the right triangle.



A
B
C

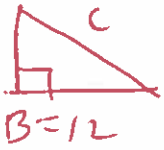
$A^2+B^2=C^2$
$(6)^2+(8)^2=C^2$
$36+64=C^2$
$100=C^2$
$\sqrt{100}=\sqrt{C^2}$
$10=C$

The length of the third side is [ ].

Answer: 10

117. Sketch the right triangle and find the length of the side not given. If necessary, approximate the length to the nearest thousandth.

leg = 16, leg = 12



$A^2+B^2=C^2$
$(16)^2+(12)^2=C^2$
$256+144=C^2$
$400=C^2$
$\sqrt{400}=\sqrt{C^2}$
$20=C$

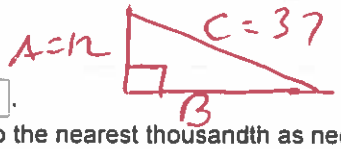
What is the length of the side not given?

[ ] (Round to the nearest thousandth as needed.)

Answer: 20

118. Sketch the right triangle and find the length of the side not given.

leg = 12, hypotenuse = 37

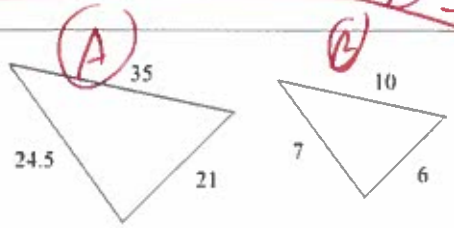


$A^2+B^2=C^2$
$(12)^2+B^2=(37)^2$
$144+B^2=1369$
$144+B^2-144=1369-144$
$B^2=1225$
$\sqrt{B^2}=\sqrt{1225}$
$B=35$

The unknown length is [ ].
(Type an integer or decimal rounded to the nearest thousandth as needed.)

Answer: 35

119. Find the ratio of the corresponding sides of the given similar triangles.

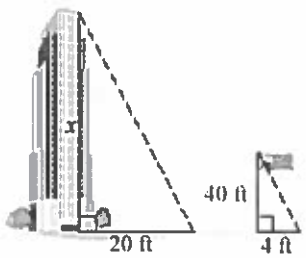


$\frac{A}{B}=$
$\frac{35}{10}=$
$\frac{7(5)}{2(5)}=$
$\frac{7}{2}=$

The ratio of the corresponding sides of the first triangle to the second triangle is [ ].
(Type the ratio as a simplified fraction.)

Answer: $\frac{7}{2}$

120. A triangle is formed by the building's height and shadow. Another triangle is formed by the flagpole's height and shadow. Using the following diagram, find the height of the building.



$\frac{x}{20} = \frac{40}{4}$ cross mult

$x(4) = 20(40)$

$4x = 800$

$\frac{4x}{4} = \frac{800}{4}$

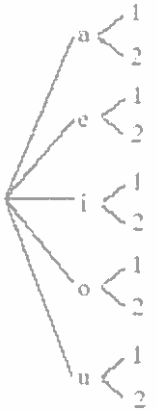
$x = 200$

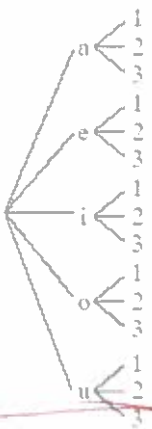
The height of the building is _____ feet.

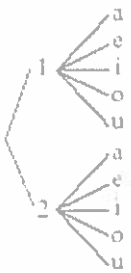
Answer: 200

121. Draw a tree diagram for choosing a vowel, (a, e, i, o, u) and then a number (1 or 2). Use the diagram to find the number of possible outcomes.

○ A. ○ B. ○ C. ○ D.

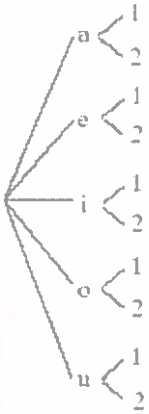






Based on the tree, what is the number of possible outcomes? _____

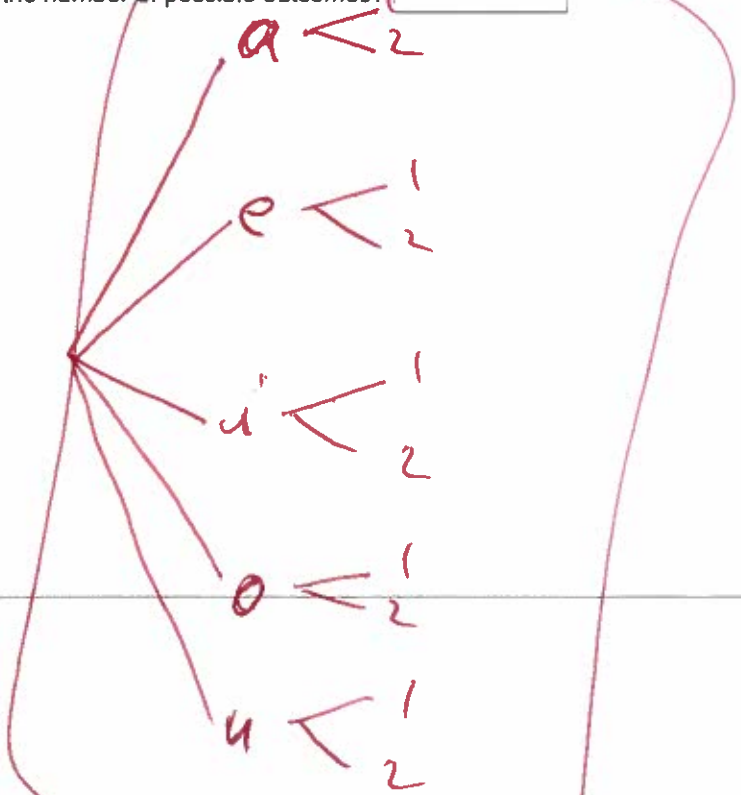
Answers



$5(2) = 10$

A.

10



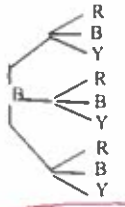
122. Draw a tree diagram for spinning Spinner A 2 times. Use the diagram to find the number of possible outcomes.

Spinner A

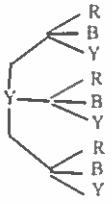
Based on the tree, what is the number of possible outcomes?

Choose the correct tree diagram below.

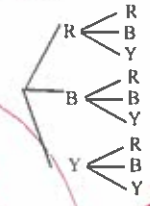
A.



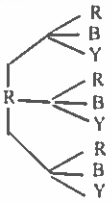
B.



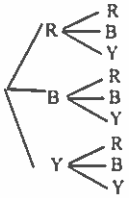
C.



D.

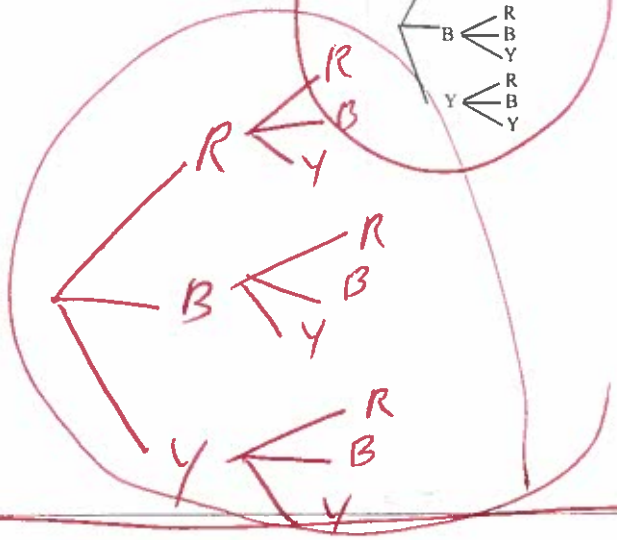


Answers



C.

9



123. A marble is selected at random from a jar containing 3 red marbles, 6 yellow marbles, and 4 green marbles.

What is the probability that the marble is red?

The probability that the marble is red is ____. (Type an integer or a simplified fraction.)

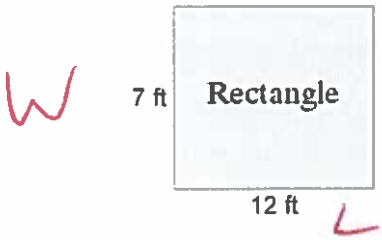
Answer: $\frac{3}{13}$

$$\frac{\text{red}}{\text{red} + \text{Yellow} + \text{Green}} =$$

$$\frac{3}{3+6+4} =$$

$$\frac{3}{13}$$

124. Find the perimeter of the following figure.



$P = 2L + 2W$
$P = 2(12) + 2(7)$
$P = 24 + 14$
$P = 38$

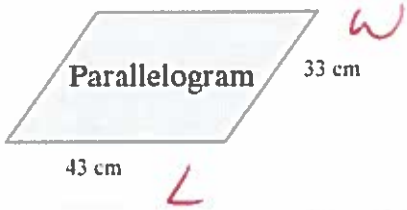
Perimeter = [ ] (1) [ ]

(1) ○ ft
○ sq. ft

Answers 38

(1) ft

125. Find the perimeter of the following figure.



$P = 2L + 2W$
$P = 2(43) + 2(33)$
$P = 86 + 66$
$P = 152$

$\begin{array}{r} 1 \\ 86 \\ +66 \\ \hline 152 \end{array}$

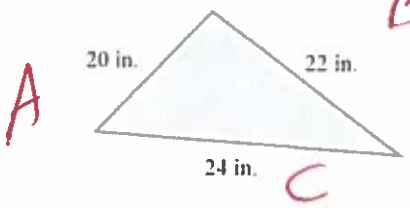
Perimeter = [ ] (1) [ ]

(1) ○ cm
○ sq. cm

Answers 152

(1) cm

126. Find the perimeter of the following figure.



$P = A + B + C$
$P = 20 + 22 + 24$
$P = 42 + 24$
$P = 66$

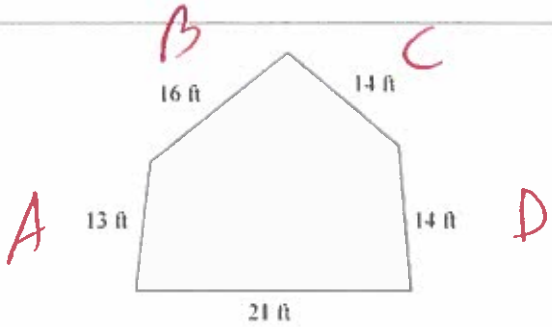
The perimeter is ____ (1) ____

(1) ○ sq. in.
○ in.

Answers 66

(1) in.

127. Find the perimeter of the figure shown to the right.



Perimeter = ____ (1) ____

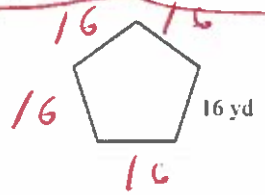
$P = A + B + C + D + E$
$P = 13 + 16 + 14 + 14 + 21$
$P = 29 + 14 + 14 + 21$
$P = 43 + 14 + 21$
$P = 57 + 21$
$P = 78$

(1) ○ sq. ft.
○ ft.

Answers 78

(1) ft.

128. Find the perimeter of the regular polygon shown to the right.



Perimeter = ____ (1) ____

$P = 5N$
$P = 5(16)$
$P = 80$

$16 \times 5 = 80$

(1) ○ sq yd
○ yd

Answers 80

(1) yd

129. If a playing field is 56 yards wide and 115 yards long, what is the perimeter?

W
L

Perimeter = _____ (1) _____

(1) ○ yd
○ sq. yd

$P = 2L + 2W$
$P = 2(115) + 2(56)$
$P = 230 + 112$
$P = 342$

230
+112
342

Answers 342

(1) yd

130. A metal strip is being installed around a workbench that is 9 feet long and 3 feet wide. Find how much stripping is needed.

L W

The amount of metal stripping needed to be installed around the workbench is _____ (1) _____

(1) ○ ft.
○ sq. ft.

$P = 2L + 2W$
$P = 2(9) + 2(3)$
$P = 18 + 6$
$P = 24$

Answers 24

(1) ft.

131. Find the perimeter of the top of a square compact case if the length of one side is 11 inches.

The perimeter is _____ (1) _____

(1) ○ square inches.
○ cubic inches.
○ inches.

$P = 2L + 2W$
$P = 2(11) + 2(11)$
$P = 22 + 22$
$P = 44$

Answers 44

(1) inches.

W L

132. A rectangular room measures 10 feet by 12 feet. Find the cost of installing a strip of wallpaper around the room if the wallpaper costs $0.75 per foot.

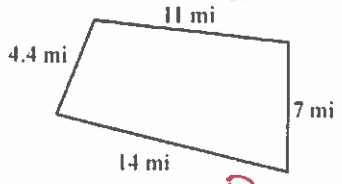
Total cost = $ _____

$P = 2L + 2W$
$P = 2(12) + 2(10)$
$P = 24 + 20$
$P = 44$

44
x $0.75
220
308
$33.00
Total Cost

Answer: 33.00

133. Find the distance around the given figure.



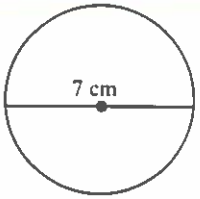
The distance around the figure is ____ (1) ____

(1) ○ sq mi.
○ mi.

Answers 36.4

(1) mi.

134. Find the circumference of the circle. Give the exact circumference and then an approximation. Use $\pi \approx 3.14$.



The exact circumference of the circle is ____ (1) ____
(Simplify your answer. Type an exact answer in terms of π.)

The approximate circumference of the circle is ____ (2) ____
(Type an integer or a decimal rounded to the nearest hundredth.)

(1) ○ square centimeters.
○ centimeters.

(2) ○ centimeters.
○ meters.
○ feet.

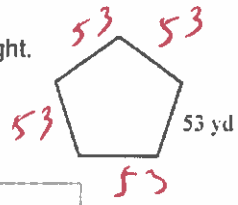
Answers 7π

(1) centimeters.

21.98

(2) centimeters.

135. Find the distance around the regular pentagon shown to the right.



The distance around the figure is ____ (1) ____

(1) ○ yd.
○ sq yd.

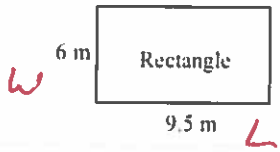
Answers 265

(1) yd.

$P = 5w$
$P = 5(53)$
$P = 265$

53
× 5
265

136. Find the area of the given geometric figure.



w
L

The area of the rectangle is ____ (1) ____
(Simplify your answer.)

(1) ○ sq m.
○ cu m.
○ m.

Answers 57

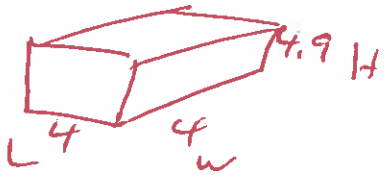
(1) sq m.

$A = LW$
$A = (9.5)(6)$
$A = 57.0$
$= 57$

3
9.5
× 6
57.0

137. A computer has shape of a rectangular solid. Find the volume of the computer, with dimensions of 4 inches by 4 inches by 4.9 inches.

The volume of the computer is ____ (1) ____
(Simplify your answer. Type an integer or a decimal.)



(1) ○ in.
○ sq in.
○ cu in.

Answers 78.4

(1) cu in.

$V = LWH$
$V = (4)(4)(4.9)$
$V = 16(4.9)$
$V = 78.4$

52
16
× 4.9
144
64
78.4

138. Convert the measurement indicated.

12 in to feet

12 in = _____ ft

Answer: 1

12 in to feet

$\frac{12}{12} =$

1 foot =

139. Convert the measurement as indicated.

12 yd to feet

12 yd = _____ ft

Answer: 36

12 yd to feet

12 (3 feet) =

36 feet

140. Insert <, >, or = in the space between the paired numbers to make the statement true.

7 __ 14

7 (1) _____ 14

(1) ○ =
○ <
○ >

Answer: (1) <

7 < 14

141. Use the commutative and associative properties to simplify the expression.

(15 + a) + 15

(15 + a) + 15 = _____

Answer: a + 30

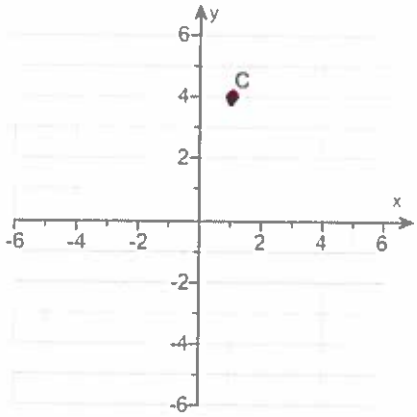
(15+a) + 15 =

15 + a + 15 =

a + 15 + 15 =

a + 30 =

142. Find the x- and y-coordinates of the point C.



The coordinates of C are _____.
(Type an ordered pair.)

(1, 4)
1 right
up 4

Answer: (1,4)

143.

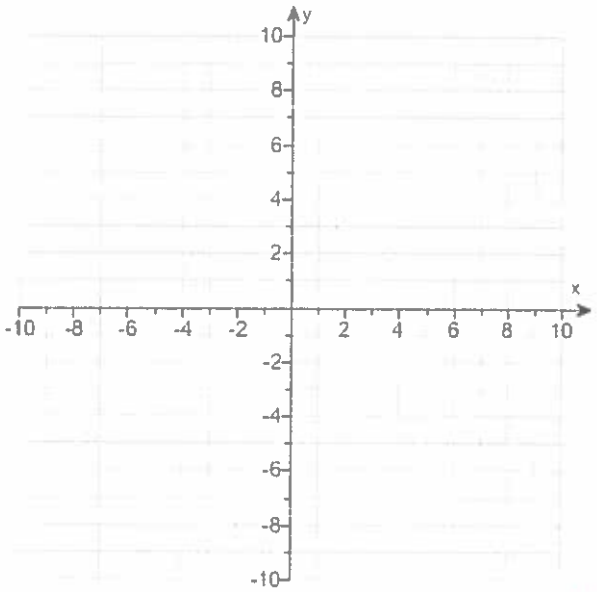
For the equation, find three ordered pair solutions by completing the table. Then use any two of the ordered pairs to graph the equation.

$y = \frac{1}{2}x$

Complete the table below.

x	y
0	
−4	
4	

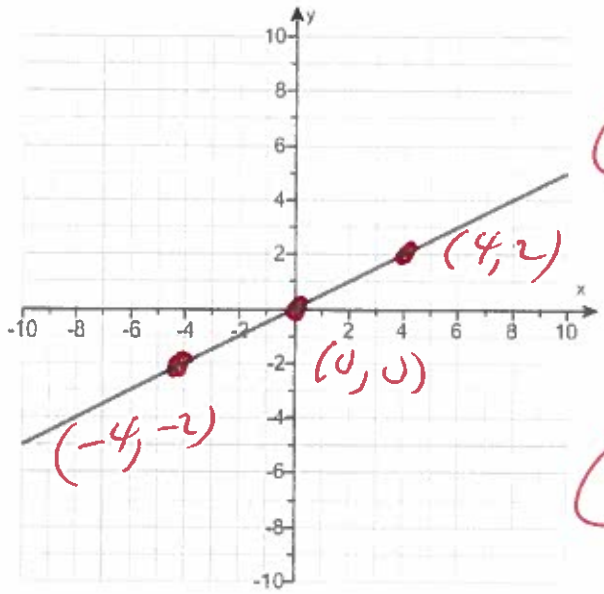
Use the graphing tool to graph the equation.



Answers 0

−2

2



$y = \frac{1}{2}(-4)$

$y = \frac{-4}{2}$

$y = -2$

$y = \frac{1}{2}(0)$

$y = \frac{0}{2}$

$y = 0$

$y = \frac{1}{2}(4)$

$y = \frac{4}{2}$

$y = 2$

x	y
−4	−2
0	0
4	2

Points

(−4, −2)

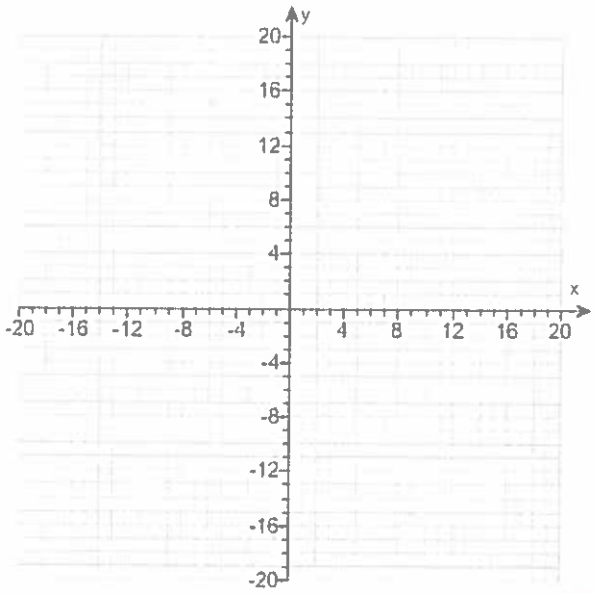
(0, 0)

(4, 2)

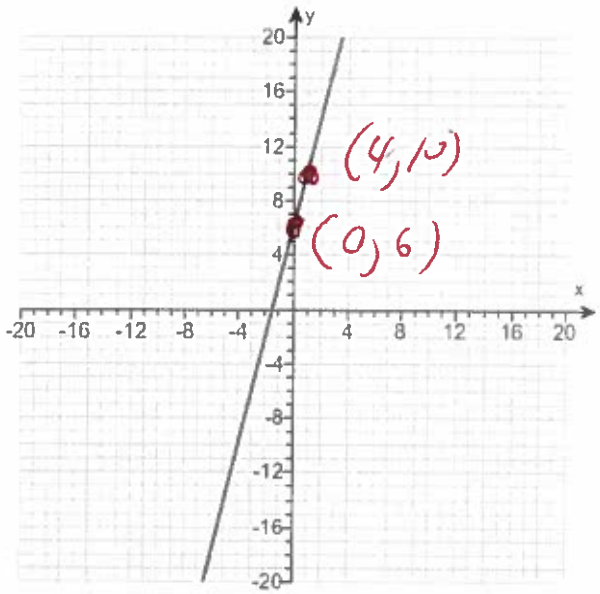
144. Graph the equation.

$y = 4x + 6$

Use the graphing tool to graph the line.



Answer:



$y = 4x+6$

$y = 4(0)+6$

$y = 0+6$

$y = 6$

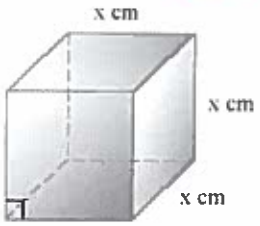
x	y
0	6
1	10

$y = 4(1)+6$

$y = 4+6$

$y = 10$

145. The function $V(x) = x^3$ may be used to find the volume of a cube with side length x. Find the volume of a cube whose side is 10 centimeters.



The volume is [ ] cubic centimeters. (Type an integer or a decimal.)

Answer: 1000

$V(x) = x^3$

$V(10) = (10)^3$

$V(10) = (10)(10)(10)$

$V(10) = 100(10)$

$V(10) = 1000$